

## Recovery Plan Action Status

**Plan Name:** Vicia menziesii Recovery Plan

**Plan Status:** Final

**Plan Date:** 18-May-84

**Lead Agency:** USFWS

**Lead Office:** Pacific Islands Fish And Wildlife Office

(408)

(792-9400 )

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Hawaiian vetch (Vicia menziesii)	2	11	Delineate essential habitat	Partially Complete	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division	Work type not yet selected	Labor type not yet selected	This task was completed in 1984 (See Appendix A of plan), but needs to be revised based on new information and new location found on Hualalai mountain.
Hawaiian vetch (Vicia menziesii)	1	121	Secure Keauhou portion of essential habitat, develop	Complete	Prior to FY 1995	FY 1995 - FY 1999	U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Acquisition: Management Agreement	Contract, Internal Administrative	ES was a partner but not the lead in this task.
Hawaiian vetch (Vicia menziesii)	1	122	Secure Kilauea portion of essential habitat, develop	Complete	Prior to FY 1995	Prior to FY 1995	U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Acquisition: Management Agreement	Contract, Internal Administrative	ES was a partner but not the lead in this task.
Hawaiian vetch (Vicia menziesii)	1	123	Secure Kulani Prison Farm (state lands) portion of essential habitat	Complete	Prior to FY 1995	Prior to FY 1995	U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Acquisition: Management Agreement	Contract, Internal Administrative	ES was a partner but not the lead in this task.
Hawaiian vetch (Vicia menziesii)	1	131	Fence habitat as needed	Partially Complete	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, National Park Service, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Internal Field Assistance, Internal Technical Assistance, Volunteer	Much of the area is fenced, and funding is being sought for the remaining fence needed.

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Hawaiian vetch (Vicia menziesii)	1	132	Maintain perimeter fence line	Ongoing Current	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, National Park Service, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Volunteer	
Hawaiian vetch (Vicia menziesii)	1	141	Promote hunting program within the essential habitat area to eliminate ungulates	Discontinued	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Fish and Wildlife Service, Endangered Species Division	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Internal Administrative	This task has been abandoned, since the landowners are all part of the OKMG and have fenced or are in the process of fencing all essential habitat area to eliminate ungulates. This task may need to be reinitiated if any of the landowners change their ungulate management actions.
Hawaiian vetch (Vicia menziesii)	2	142	Explore use of other control measures to eliminate feral animal populations	Ongoing Not Current	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, National Park Service, Ola'a Kilauea Management Group	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control, Research: Management Techniques	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	The OKMG has used some public hunting, as well as live trapping and release into public hunting areas, but the most efficient method has been fencing and removal with NPS hunting dog teams.
Hawaiian vetch (Vicia menziesii)	2	15	Devise and implement measures for removal of exotic plants from present Vicia habitat	Ongoing Not Current	FY 1995 - FY 1999		U.S. Geological Survey, Biological Resources Division, Ola'a Kilauea Management Group	Management: Habitat Maintenance and Manipulation, Management: Planning, Management: Predator and Competitor Control	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	This task is being implemented by the OKMG.

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Hawaiian vetch (Vicia menziesii)	2	211	Obtain demographic information of existing population	Ongoing Not Current	Prior to FY 1995		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Research: Demographic Studies	Contract, Internal Field Assistance, Species Expert	State DOFAW conducted extensive surveys in 1980. BRD and OKMG continue to monitor populations and observe demographics.
Hawaiian vetch (Vicia menziesii)	2	2121	Survey area between Pu'u Lala'au and Pu'u Kipu for possible presence of V. Menziesii	Complete	Prior to FY 1995	Prior to FY 1995	Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Research: Population Surveys	Internal Field Assistance	HIDFor completed extensive surveys in 1980.
Hawaiian vetch (Vicia menziesii)	2	2122	Survey areas in and adjacent to the Ka'u Forest Reserve for possible presence of V. Menziesii	Complete	Prior to FY 1995	Prior to FY 1995	Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources	Research: Population Surveys	Internal Field Assistance	HIDFor completed extensive surveys in 1980.
Hawaiian vetch (Vicia menziesii)	2	221	Determine ecological requirements of V. menziesii	Ongoing Not Current	Prior to FY 1995		U.S. Geological Survey, Biological Resources Division	Research: Demographic Studies, Research: Habitat Requirements, Research: Habitat Status, Research: Population Surveys	Contract, Internal Field Assistance, Species Expert	
Hawaiian vetch (Vicia menziesii)	3	222	Determine reintroduction sites as needed	Ongoing Not Current	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Management: Reintroduction	Contract, Graduate Student, Species Expert	

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Hawaiian vetch (Vicia menziesii)	3	23	Determine the horticultural procedures to be employed in species dispersal plan	Ongoing Not Current	Prior to FY 1995		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group, Volcano Rare Plant Facility	Research: Propagation, Research: Reintroduction	Contract, Graduate Student, Internal Technical Assistance, Species Expert	VRPF has had success growing this species from cuttings, but plants in the greenhouse have not set viable seed.
Hawaiian vetch (Vicia menziesii)	3	241	Provide additional data on the effects of ungulates	Complete	Prior to FY 1995	FY 1995 - FY 1999	U.S. Geological Survey, Biological Resources Division, National Park Service, Ola'a Kilauea Management Group	Research: Habitat Status, Research: Predation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance	Partially completed by work done by DOFAW. Numerous studies have been conducted on the impacts of feral ungulates to native vegetation, and the results can be applied to Vicia menziesii habitat.
Hawaiian vetch (Vicia menziesii)	2	242	Determine significance of insect predation	Not Started			U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division	Research: Predation	Contract, Internal Field Assistance, Internal Technical Assistance	
Hawaiian vetch (Vicia menziesii)	3	243	Determine significance of rodent predation	Ongoing Not Current	Prior to FY 1995		U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Research: Predation	Contract, Graduate Student, Internal Field Assistance, Species Expert	Partially completed by work done by DOFAW
Hawaiian vetch (Vicia menziesii)	1	2441	Determine the impact of exotic plants on the regeneration, growth and survival of the native flora within the management area	Complete	Prior to FY 1995	FY 2000 - FY 2004	U.S. Geological Survey, Biological Resources Division	Research: Competition, Research: Habitat Requirements, Research: Population Surveys	Contract, Internal Field Assistance, Species Expert	Numerous studies on alien plant impacts to native vegetation have been conducted, and the results of that research apply to Vicia menziesii habitat.

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Hawaiian vetch (Vicia menziesii)	1	2442	Further determine extent of habitat degradation due to conflicting land-use activities	Discontinued	Prior to FY 1995		U.S. Geological Survey, Biological Resources Division	Research: Management Techniques, Research: Other Information	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance	This task was abandoned when Bishop Estate agreed to include the area in the OKMG management area.
Hawaiian vetch (Vicia menziesii)	2	245	Identify any unknown mortality factors	Ongoing Not Current	Prior to FY 1995		U.S. Geological Survey, Biological Resources Division	Research: Competition, Research: Demographic Studies, Research: Disease, Research: Population Surveys, Research: Predation	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Hawaiian vetch (Vicia menziesii)	3	31	Implement reintroduction program as needed	Ongoing Not Current	FY 1995 - FY 1999		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group, Volcano Rare Plant Facility	Management: Reintroduction	Contract, Internal Field Assistance, Species Expert, Volunteer	HIDFor has reintroduced plants to augment the new Puu Waawaa population, and OKMG is reintroducing plants into the Kulani/Keauhou/Kilauea area, from material propagated at VRPF.
Hawaiian vetch (Vicia menziesii)	1	32	Implement a program for the amelioration of existing mortality factors	Ongoing Not Current	FY 1995 - FY 1999		U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Management: Other, Management: Predator and Competitor Control	Contract, Internal Field Assistance, Internal Technical Assistance, Volunteer	Some factors, such as ungulates and alien plants, are being controlled, but mortality still occurs at an extremely high rate and additional research is needed to determine the cause(s).
Hawaiian vetch (Vicia menziesii)	2	33	Develop proposals to achieve an integrated management approach to the restoration of other endangered species within present Vicia habitat	Complete	Prior to FY 1995	FY 1995 - FY 1999	Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, National Park Service, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Management: Planning	Internal Administrative, Internal Technical Assistance, Species Expert	The OKMG has developed a plan that incorporates all endangered species known from the area as well as landscape level habitat management.

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Hawaiian vetch (Vicia menziesii)	2	411	Establish permanent plots for repetitive sampling study (within the Kilauea-Keauhou parcel)	Not Started			U.S. Geological Survey, Biological Resources Division	Research: Competition, Research: Demographic Studies, Research: Habitat Requirements, Research: Population Surveys, Research: Predation	Contract, Graduate Student, Internal Field Assistance, Species Expert	
Hawaiian vetch (Vicia menziesii)	2	412	Assess the vegetative changes occurring within the sample plots at 3-year intervals	Not Started			U.S. Geological Survey, Biological Resources Division	Research: Habitat Status	Contract, Graduate Student, Internal Field Assistance	
Hawaiian vetch (Vicia menziesii)	2	413	Conduct aerial surveys at 10-year intervals	Ongoing Not Current	Prior to FY 1995		Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Population Surveys	Contract, Graduate Student, Internal Field Assistance, Species Expert	
Hawaiian vetch (Vicia menziesii)	3	42	Conduct a similar monitoring program consisting of studies 411, 412, 413 above, for those areas into which the Vicia is introduced as part of the dispersal plan--if appropriate	Not Started			Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Research: Competition, Research: Demographic Studies, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys, Research: Predation, Research: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert	
Hawaiian vetch (Vicia menziesii)	2	51	Prepare posters, leaflets, and summary information for general dissemination and media use	Not Started			Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, U.S. Fish and Wildlife Service, Endangered Species Division, Ola'a Kilauea Management Group	Other: Information and Education	Contract, Graduate Student, Internal Administrative, Internal Technical Assistance, Species Expert	

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Hawaiian vetch ( <i>Vicia menziesii</i> )	2	52	Establish interpretive displays at Hawaii Volcanoes National Park HQ and major public libraries	Not Started			National Park Service, U.S. Fish and Wildlife Service, Endangered Species Division	Other: Information and Education	Contract, Graduate Student, Internal Administrative, Internal Technical Assistance, Species Expert, Volunteer	